Kolak, Shari

From: Madelyn.Adams@epa.ohio.gov
Sent: Friday, January 29, 2016 9:49 AM
To: Kolak, Shari
Subject: RE: moisture barrier - VI Sub-slab sampling

I am looking at the building code and I keep finding that it says the moisture/vapor layer goes above the granular sub-base. Which part of the rule did you see where it said it needs to go under the gravel layer? It looks like there are different rules based on the type of flooring used. I always thought they had to put the vapor barrier down then the gravel then the slab. I'm hoping I'm just reading the wrong rule.

From: Kolak, Shari [mailto:kolak.shari@epa.gov]
Sent: Friday, January 29, 2016 10:25 AM
To: Adams, Madelyn
Subject: Re: moisture barrier - VI Sub-slab sampling

Existing Ohio building code requires it (did a Google search). Not sure if it was required back in 1990"s when addition was built. I called and emailed the church contact but he's out til Monday. If we can't get the info from him, I'll send the letter. Shari

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From: Madelyn.Adams@epa.ohio.gov <Madelyn.Adams@epa.ohio.gov>
Sent: Friday, January 29, 2016 9:19:34 AM
To: Kolak, Shari
Cc: Fischer, Timothy; mike.starkey@epa.ohio.gov; randall.kirkland@epa.ohio.gov
Subject: RE: moisture barrier - VI Sub-slab sampling

Also, I've been trying to find building code information on vapor/moisture barriers but haven't had much luck. Where did you get this information *Is this because Ohio's building code requires a gravel layer above the 6-mil moisture barrier?* Do you know that that is a requirement, or are you asking if it is a requirement?

From: Adams, Madelyn
Sent: Friday, January 29, 2016 9:59 AM
To: 'Kolak, Shari'
Cc: 'Fischer, Timothy'; Starkey, Mike; Kirkland, Randall
Subject: RE: moisture barrier - VI Sub-slab sampling

I spoke with the county building inspector and they only keep records for 5 years. They didn't have anything on 20 South Walnut Street. I believe the work on the new building was done in 2003-2004.

Randy doesn't recall any mention of a moisture barrier when doing the work in 2006. The sampling protocol used during the 2006 Removal Action called for the probe to extend no more than 1 inch below the slab. Randy recalled that as standard practice, when an installer felt the drill break through the slab (a noticeable change in resistance), the installer immediately stopped drilling.

If the barrier is below the gravel layer, care can be taken to not puncture the barrier. The building plans for the church would be the most helpful in determining whether or not the barrier exists and if so, if it can be avoided.

From: Adams, Madelyn
Sent: Friday, January 29, 2016 8:43 AM
To: 'Kolak, Shari'

Cc: Fischer, Timothy; Starkey, Mike; Kirkland, Randall
Subject: RE: moisture barrier - VI Sub-slab sampling

Shari,

Breaking down Mike's response: We aren't sure if a moisture barrier exists because so far, we haven't gotten any permits or as-built records. If there is a moisture barrier, we can determine where it is and avoid it. The sub-slab samples are very small in diameter (about an inch) and they will be properly abandoned to ensure they are air tight. Even if the sample hole were to penetrate the moisture barrier, we don't anticipate that the sample holes will create a conduit for moisture to rise up and affect the building, any impact would be minimal because the hole would be minimal and the holes will be properly sealed and abandoned.

Below you note that Ohio building codes require a gravel layer above the 6-mil moisture barrier. If this is the case and the moisture barrier is required to be below the gravel layer, we will be able to avoid puncturing it – we will have to be very careful when drilling to the base of the concrete, but it wouldn't be an impossible feat.

I am going to check with the county to see if they have a permit on file for the moisture barrier installation at this property. The long and short is, if we are truly concerned there is a moisture barrier and we want to make sure we preserve its integrity, we need the paperwork on how it was installed (how deep it is, how thick the concrete is above it, if it's above or below the gravel layer). If we know where the moisture barrier lies underneath the slab, then we can make sure we avoid it when taking sub-slab samples. Did you send your letter from legal requesting access and the building plans? How has the church responded so far?

On your end, maybe take a look at the Removal Action field logs. It could be that this was discussed in 2006 and the removal program was able to avoid the moisture barrier. We could follow what they did in 2006. Randy Kirkland did the sample of the building back then, I can ask him if he remembers anything on a moisture barrier and if so, how they installed the sub-slab sample. Steve Renninger was the lead for the Removal Action, he may also have some insight on installing sub-slab samples to avoid barriers. I will also discuss this with SIFU, I'm sure they've come across this sort of issue with all the VI work they've done.

I will keep you posted on what I find. Please let me know if you have any more questions or concerns,

Maddie

From: Kolak, Shari [mailto:kolak.shari@epa.gov]
Sent: Thursday, January 28, 2016 6:07 PM
To: Adams, Madelyn
Cc: Fischer, Timothy
Subject: moisture barrier - VI Sub-slab sampling

Maddie,

When Mike Starkey accepted the meeting invite, he wrote: *" I think we need to verify the moisture barrier's existence rather than continue to make assumptions that there is one. Even if one exists, any sub slab borings will have a minimal, if any, effect on the overall performance of the alleged moisture barrier.*

Sounds like OEPA already knows vapor probes will not penetrate the moisture barrier, if there is one. Is this because Ohio's building code requires a gravel layer above the 6-mil moisture barrier? If not, what's the basis for Mike's statement? Thanks, Shari

Shari Kolak
Remedial Project Manager
U.S. EPA, Region 5